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MULTINATIONALS AND INDIAN PHARMACEUTICAL INDUSTRY

No industry exercises as much profound an influence over the effectiveness of policies to protect the health and promote social development of a nation as the pharmaceutical industry. The following is an attempt towards improving our understanding of the problems relating to the control of multinational corporations and its implications to the development of this industry in India. This has become all the more necssary, for, Indian pharmaceutical industry characterised by dependence on multinational corporations is alleged to have neglected its social content and purpose by ignoring the health needs of India's majority. Before dwelling deeper into such issues, let us briefly touch upon the international structure of this industry dominated by multinational corporations.

Influence of Multinational Corporations on Global Industrial Structure

The availability of pharmaceutical products manufactured by large and sophisticated pharmaceutical firms is one of the most salient developments in the health care in Third World countries in recent decades. While precise figures are not available, marketing surveys indicate that developing countries account for approximately 20 per cent of the world pharmaceutical consumption, though they account for only 13 per cent of

world production. The developing world as a whole is therefore a net importer of pharmaceutical products from developed countries.

The world production of pharmaceuticals is concentrated in a small number of countries. France, the Federal Republic of Germany, Italy, Japan and the United States accounted for roughly 80 per cent of the total output of medicines in 1970. In 1974, these countries together with Switzerland exported approximately 75 per cent of the total value of mediciens in the international commerce.

Though several thousand manufacturers exist in the area of drugs and pharmaceuticals, a few multinational corporations have a predominant share in the total production. In 1970, 61 leading multinational corporations in the industry accounted for 60 per cent of the total production of pharmaceuticals in the world market economies. This concentration is on the increase. Table I illustrates that by 1974 only 30 multinational corporations accounted for over half the total output of drugs in the developed market economies. The large 10 companies

TABLE I

CONCENTRATION PRODUCTION IN THE PHARMACEUTICAL INDUSTRY

Sales	1970		1974	
	Million U S $	Share(%)	Million U S. $	Share(%)
Total sales of developed market economies	18,633	100	34,001	100
Sales of leading 10 firms	4,987	27	9,498	28
Sales of leading 20 firms	7,748	42	14,561	43
Sales of leading 30 firms	9,249	50	17,682	52

SOURCE: UNIDO: The Growth of Pharmaceutical Industry in Developing Countries: Problems and Prospects, 1978.

in the world accounted for 28 per cent, while the top 20 companies contributed nearly 43 per cent of the world output of pharmaceuticals.

The research done so far on the control and domination of pharmaceutical industry by multinational corporations brought out very disturbing aspects of their operations across national frontiers. The feeling that multinational corporations are research intensive is now increasingly questioned. For, it was revealed that most of the innovations of multinationals are of dubious kind and fall in the category of '*molecule manipulation*' without any therapeutic gains but only a by-product of marketing research than genuinely innovational research. Though sources of their market power is assumed to rest on their technological superiority, studies show that increasing mergers due to sheer price war against small firms led to high concentration and not so much due to technological superiority. The abnormally high levels of profit that the industry is mopping up is due to the unethical means, such as abuse of patents and brand names especially against the interests of developing countries, transfer pricing, produt differentiation, high powered persuasive promotion, dumping of inappropriate or dangerous drugs to the less resistant Third World counties etc. These are only a few in the long list. Concern over the activities of multinational corporations is voiced all over the world for, their existence appeared to threaten the very concept of a need oriented pharmaceutical industry in the Third World countries. With this introduction to the global phenomenon, we may now examine the Indian pharmaceutical industry.

Origin and Development of Pharmaceutical Industry in India

In ancient India, the needs and demands for medicine were met by the practitioners of the indigenous systems of medicine like *Ayurveda, Siddha* and *Unani*. Ironically enough, inspite of the great leap in modern pharmaceutical industry in the recent years, it could not make a dent into the medical needs of the majority of the population. The needs of the majority population (80%) even today are unattended by the allopathic system.

The history of the modern allopathic system in India commenced when the British pharmaceutical manufacturers opened up trading branches for their finished goods manufactured in Britain. They exported from India large quantities of our herbs and medicinal plants but this process was suddenly suspended during the war years. Subsequently, attempts were made to import bulk ingredients and began importing bulk ingredients for local farbrications by hitherto trading companies. This period also witnessed the emergence of some non-British firms mainly from the U. S. and Switzerland entering the Indian market with dosage formulations from imported bulk drugs. The emergence of Indian firms with simpler fabrication technology was somehow precluded because the supply of active ingredients was controlled by foreign companies. However there were a few attempts on the part of Indian entrepreneurs to initiate the production of vaccines and drugs of chemical and plant based processes. For example, in 1901 Acharya P. C. Ray established the Bengal Chemical and Pharmaceutical Works with the production of simple chemicals. In 1907, Alembic Chemical Works was established at Baroda jointly by T. K. Gajjar and Rajmitra B. D. Amin. On the part of scientists too, research in tropical diseases such as malaria, typhoid, cholera etc, were undertaken and attempts were made to discover medicines based on plants and chemical based processes in research laboratories like Haffkine Institute (Bombay), King Institute, Central Research Institute and Pasteur Institute. But local industry attempting to make use of local innovations faced several problems like competition from foreign producers, lack of support from government etc, and therefore could not make much headway. In short, till independence, the pharmaceutical industry was mostly confined in the area of local formulations of imported raw materials, controlled by foreign enterprises. But ten other private Indian companies were also existing along with foreign companies demonstrating a kind of capability in producing medicines based on indigenous processes.

Industry Since Independence

Over time the industry moved slowly from trading and local

manufacturing of imported ingredients into the manufacture of the very ingredients themselves in some areas. The Indian pharmaceutical industry now produces a wide range of drugs including sophisticated ones such as antibiotics, hormones and vitamins, in addition to a large number of other synthetic chemo-therapeuticals. India has become one of the few developing countries whose pharmceutical manufacture has reached a high level of self-sufficiency, oriented towards full integration at least for the main sectors of the economy. For example, India produces 30 thousand formulations in different forms like tablets, liquids, injectables using about 400 bulk drugs being manufactured in the country. In its classification of pharmaceutical industries of less developed countries, UNIDO placed India in Group 5, representing the most advanced stage. Some of the characteristics of this stage as defined by UNIDO are near self-sufficiency in raw-materials for the production of drugs from basic stages, a wide variety of therapeuetic groups of drugs produced etc.

The total investment in the pharmaceutical sector expanded from Rs. 24 crores in 1952 to Rs. 200 crores in 1972 and further to 500 crores by 1982. The value of output which was only Rs. 10 crores in 1948 rose to 300 crores in 1971-72. By 1974, the value of production of drugs and pharmaceutical products reached the level of Rs. 377 crores and further to Rs. 1440 crores by 1981-82. Over time, there has been a remarkable reduction in the import dependence ratio and the proportion of exports in the total production also increased. Taken the two decades of 1960s and 1970s together, the annual compound growth rates in domestic production and exports appeared remarkable (see table II). The import as percentage to production by 1980-81 constituted only 7.77 per cent of the total production.

4) A Deceptive Appearance?

The evidence presented above on the growth of pharmaceutical industry in India suggests an impressive picture. But a closer look, however, reveals a somewhat different picture of extremely disquieting features. Though the total number of nearly 5200 licensed drug units is among the highest in the world but the share of pharmaceutical industry in the world

TABLE II

IMPORTS, EXPORTS AND OUTPUT GROWTH IN THE INDIAN PHARMACEUTICAL INDUSTRY

Year	Imports (Rs. crores)	Exports (Rs. crores)	Production	Imports as % to Production
1960-61	17.60	—	88.00	20.00
1961-62	17.78	1.57	87.00	20.43
1962-63	14.61	1.67	90.00	16.30
1963-64	13.14	1.55	120.00	10.95
1964-65	12.93	4.16	135.00	9.57
1965-66	13.80	3.80	168.00	8.21
1966-67	17.41	3.77	170.00	10.24
1967-68	17.52	3.33	185.00	9.47
1968-69	17.50	4.00	200.00	8.75
1969-70	18.30	6.00	235.00	7.78
1970-71	24.27	8.46	250.00	9.70
1971-72	26.56	9.63	300.00	8.85
1672-73	23.33	10.32	345.00	6.73
1973-74	34.16	54.13	377.00	9.06
1974-75	40.99	54.13	490.00	8.36
1975-76	46.02	69.02	690.00	6.66
1976-77	54.00	54.13	850.00	6.35
1977-78	82 00	25.59	1064.00	7.70
1978-79	95.00	69.02	1250.00	7.60
1979-80	94.00	71.16	1376.00	6.83
1980-81	112.00	76.18	1440.00	7.77
Growth rate (Compound %per annum)	11.07	20.10	14.68	

production is as low as 1.2 per cent. Per capita drug consumption is one of the lowest in the world, embracing only 20 per cent of the total population (see table III).

Since independence, the Government of India permitted the Multinational Corporations to set up units in India so that India

TABLE III

CONSUMPTION OF DRUGS

Country	Rs. per capita
India (Rural)	6
India overall	19
Indonesia	30
Pakistan	30
Philippines	55
Turkey	65
Egypt	70
Nigeria	70
Taiwan	120
Mexico	150
South Korea	210
Japan	1000

may get access to new discoveries of the West. The liberal approach to foreign collaboration in the pharmaceutical industry was highly detrimental to the development of the initiatives already taken by the then existing research institutes in India. The "pro-foreign" attitudes of the Government of India enabled multinationals with ready access to the sophisticated technical knowhow as well as modern managerial talents to establish production facilities. A closer look at the history of the development of this industry will instruct us about the weak chemical base over which it is erected. While the pharmaceutical sector in developed countries came to be established as a result of diversification of basic chemicals, the growth process in India was characterised by a *reverse process* of backward integration which has the adverse effect of making the industry dependent on multinational corporations for the supply of raw materials and other inputs. Therefore as early as 1952 the Pharmaceutical Enquiry Committee warned that "...no foreign concerns should be allowed to set up factories unless they undertook to manufacture products which were not manufactured in

adequate quantities by other factories, starting from basic chemicals and/or intermediate as near to the basic chemicals as possible within a reasonable time".[1] But subsequent liberalisation of major intsruments of controls like licensing, foreign collaboration guidelines etc, went against the spirit of recommendation of the Pharmaceutical Enquiry Committee and thereby facilitated growth of foreign companies. By 1965 there were 35 foreign owned companies operating in India.

The production technology of modern pharmaceutical industry broadly consists of two stages: (a) raw material or active ingredients and (b) manufacture, dosage—form fabrication. The fabrication technology being simpler and well known, as already observed in the beginning, Indian firms could have started the dosage formulation of their own. But such a possibility was precluded because of the control of active ingredients by foreign firms under the cover of internalional patent system. Consequently, even the dosage formulation that got established in India remained largely under the foreign ownership and control. Thus the domination of multinational corporations in the production and trade of drugs and medicines thus remained a typical feature of Indian pharmaceutical industry.

Dependence on Multinational Corporations

The industry is composed of three sectors on the basis of ownership structure: (a) public sector (b) foreign sector and (c) private Indian sector. The government after the country's independence in 1947 adopted the principle that production of basic drugs should be in the public sector at least partly if not totally with a view to making common drugs available and to eliminate the dependence on Multinational Corporations. The introduction of a public sector through Hindustan Antibiotics Ltd in 1955 and Indian Drugs and Pharmaceuticals Ltd in 1967 made all the difference. The impact of public sector enterprises could be seen in the seventies with increased indigenous production of a large number of bulk drugs. Though public sector could make a headway into the production of bulk drug,

1 See Report of the Pharmaceutical Enquiry Committee, 1952.

the elimination of multinational corporations remained a dream. We shall be discussing these aspects later.

Let us now gather a birds eyeview of the structure of Indian pharmaceutical industry. As mentioned earlier, by 1981-82 there were around 5156 units with an estimated investment of Rs. 500 crores. Out of this nearly 130 are in the organised large scale sector while the remaining are small enterprises. About 41 per cent of the units are located in Maharashtra, Gujarat, West Bengal and Tamilnadu. The organised sector accounted for 80% of the total pharmaceutical production in the country.

Regarding the ownership pattern by 1980-81, there were about 19 foreign companies in the organised sector and 3 companies in the small scale sector which enjoyed foreign majority ownership (50 per cent of foreign equity and above) and another 20 foreign minority ownership in the organised sector and 6 firms foreign minority in the small scale sector. The details of the ownership pattern of firms as on 1980-81 are given in Table IV. The largest number of multinationals are operating in the Indian pharmaceutical industry today. The foreign companies that established Indian subsidiaries were highly reluctant to allow any Indian capital participation. Indian participation in the equity capital is a post-independence phenomenon. With independence,

TABLE IV

OWNERSHIP PATTERN OF PHARMACEUTICAL UNITS AS ON 1980

Ownership	Large scale sector		Small scale sector		Total	
	No.	%	No.	%	No.	%
Fully/Majority foreign ownership	19	14.61	3	0.06	22	0.49
Foreign minority ownership	20	15.38	6	0.13	26	0.59
Indian full ownership	89	68.46	4303	99.79	4392	98.87
Public Sector	2	1.53	—	—	2	0.04
Total	130	100.00	4312	100.00	4442	100.00

foreign private investment in Indian industries witnessed a rapid increase. The value of outstanding foreign investment in chemicals and allied products increased form Rs. 80 million in 1948 to Rs. 203 million in 1955 to Rs. 1220 in 1965 and further to Rs. 3701 million in March 1972. These figures accounted for 3%, 4.6% and 12.4% and 21% respectively of the total value of outstanding private investments in India. As on March 1972, the value of outstanding foreign investment was Rs. 661 million in medicines and pharmaceuticals.[1] By 1980-81-of the total 500 crores investment in the industry 225 crores had been by the multinationals.[2] The decade of 1950s was crucial in the history of private foreign investment in the pharmaceutical sector. Seven major foreign subsidiaries operating today were established during this period.

Foreign investment in the pharmaceutical industry has taken place mainly in the form of majority foreign subsidiary companies. This has remained so even in the 1960s. The Reserve Bank of India Survey covering the period 1964-1970, showed that among the individual industries which attracted most foreign capital, in the case of subsidiaries, medicines and pharmaceuticals was a major one (around 71%). However, the participation of Indian capital in the share capital of foreign subsidaires showed an increasing trend. Since 1960, foreign pharmaceutical manufacturers who originally established branches or fully owned subsidiaries sold a part of their share capital to nationals and converted their affiliates to joint ventures with majority foreign ownership. Thus well known firms like Pfizer, Glaxo, Jeoffery Manners, Sandoz, Biological Evans, Roche, Hoechest were converted into public limited campanies thereby enabling them to expand at the expense of Indian capital.

Impact of FERA Regulations

Significant developments are supposed to have affected the ownership pattern of foreign companies due to the enactment in 1973 of Foreign Exchange Regulations Act, that stipulated

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1 See Reserve Bank of India, Second Survey on Foreign Collaboration, 1974.

2 Calculated from O· P. P. I. Source materials, 1981-82,

that those foreign companies which engaged purely in formulation activity should bring down their equity to 40 per cent. It further legislated that those engaged in the manufacture of bulk drugs (from basic stage requiring high technology) are not required to bring down their equity at all.

Out of 54 companies in the foreign sector, 34 had majority foreign participation at the base of the enactment of FERA. Out of these 34, as many as 31 companies were allowed to continue production without reducing equity upto 40 percent. These 31 companies obtained exemption from FERA under the guise of either manufacturing sophisticated technology or being predominantly export oriented. According to 1978 drug policy announcement, only those foreign companies engaged in production of formulation not involving high technology need only to reduce non-resident equity upto 40 percent. This stipulation was a clear dilution of the recommendations of the Hathi Committee which laid down that foreign companies essentially engaged in the formulation production which is more profitable and technologically less complex should be directed to bring down their equity to 40 percent forthwith and progressively to 26 per cent. However, the high level committee appointed to identify the high technology products of foreign companies found that most of their "high technology" products are also being produced by the Indian companies as well. Nevertheless, based on high technology classification current in the policy practices, an attempt is made in Table V to draw upon the changing dimensions of ownership pattern of firms in the foreign sector of the Indian drug industry.

At present there are 48 firms in the foreign sector of Indian drug industry of which 35 firms are those in which foreign share holding is 40 per cent and above. These firms can thus be regarded as clearly under foreign control. On the lines of Hathi Committee report, if the firms in the range of 26-40 per cent non-resident equity are also be treated under control of multinational companies, 45 out of 48 firms in the foreign sector would appear to be operating under the effective foreign control of multinational companies. In 19 firms control of multinational Companies is clear and absolute by virtue of majority shareholding changing dimensions of ownership.

TABLE V

PATTERN OF FOREIGN COMPANIES

Non-resident share in foreign equity share %		1971-72*	1976-77**	1981-82***
I	Above 74	27 (for first two groups)	20	5
II	Between 50 to 74		11	14
III	Between 40 to 50	12 (for last three groups)	13	16
IV	Between 26 to 40		14	10
V	Below 26		6	3
	Total	39	64	48

* Drug prices and costs of production, Economic Times, November 15 and 16, 1977.

** Indian Drug Statistics, Ministry of Petrolium, 1978.

*** Compiled from various Issues of Association Parliamentary Digest.

Will dilution of foreign equity as contemplated by FERA lead to reduction in foreign control ? Foreign Exchange Regulations Act is a desirable step but in itself not a powerful weapon to attack the complex operation of multinational corporations. First, it is based on the simplistic assumption that the management of a company is controlled by those who have the majority equity share, but the management do not generally require a majority share to have a domination at the general body meeting. Second, empirical studies in India have shown that foreign firms have managed to dilute ownership mix in such a way as not to cause any significant dimunition in foreign control in individual cases.[1] There is no magic in a rule-of-thumb formula of direct non-resident ownership upto 40 per cent to control the extra-territoriality of foreign collaboration. In fact, it is not possible to fix precisely any particular ownership proportion as the criterion for measuring the actual control exercised by foreign companies in Indian enterprises. It all depends on who and

1 The Dutt Committee evidence clearly shows that large houses in India exercise effective control over a number of companies with even 10-15 per cent equity holding.

how widely the rest of the 60 per cent shareholding is held and above all what are the precise terms of the contract for technology. There is nothing in FERA regulations to guarantee that important issues of economic consequences will not be decided outside the country. The Hathi Committee in fact considered this aspect and indicated that equity should not be shared widely among Indian national but should be purchased by public sector institutions which are connected directly or indirectly with the manufacture of drugs, chemicals or by public financial institutions or by the government itself. But contrary to this stipulation, no safeguard was taken while dispersing the equity of foreign companies and hence they dispersed equity as widely as possible to subserve their interest of retaining control in their own grip.

Control on Production

The number of foreign companies operating in India will only show the outward manifestations of foreign control. Foreign control defined in terms of control of output is of staggering proportions. Foreign companies control about 75% of the total sales turnover of drugs in the country.[1] This refers to the year 1975–76, but since then the correct position regarding the shares of foreign companies are difficult to obtain because a number of foreign companies have reduced their equity below 40 percent, and therefore they are considered as Indian companies. To this extent the data given on production of pharmaceuticals by various sectors as given in table V is a gross underestimate. In 1980–81, foreign firms are estimated to have controlled around 2/3 of the formulations total market (Rs.790 crores out of Rs. 1200 crores). This control over the pharmaceutical market is by dosage formulation of drugs in the final stage in the production of a drug which involves very simple, if any, technology.

It is interesting to observe from Table VI that the strategy of multinational corporations in India is to take the cream out

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1 See United Nations Centre on Transnational Corporations, Transnational Corporations and the Pharmaceutical Industry, New York, 1979

TABLE VI

PRODUCTION & BULK AND FORMULATIONS (SECTOR-WISE) (RS. CRORES)

Year	Formulations				Bulk drugs			
	Public Sector	Foreign Sector	Indian Sector	Total formula-ation	Public Sector	Foreign Sector	Indian Sector	Total Bulk drugs
1974-75	25(5.00)	203(40 6)	172(34.91)	500	33(35.10)	34(36.17)	27(28.12)	94
1975-76	35(6.25)	300(53.50)	225(40.17)	560	43(33.07)	52(40.00)	35(26.92)	130
1976-77	47(6.71)	292(41.71)	361(51.57)	700	48(34.28)	63(45.00)	29(20.70)	140
1977-78	53(5.88)	697(77.49)	150(16.66)	900	47(28.65)	65(39.63)	52(31.70)	164
1998-79	60(5.71)	460(43.80)	530(50.45)	1050	49(24.50)	56(28.00)	95(47.00)	200
1979-80	62(6.26)	778(67.65)	300(26.00)	1150	59(26.10)	53(23.45)	114(49·45)	226
1980-81	80(6.66)	790(95.83)	330(27.5)	1200	63(25.92)	53(21.80)	124(51.00)	243

NOTE: Figures in the bracket indicate percentage to total formulations and bulk drugs respectively.

of Indian market with minimum involvement in terms of integration into basic chemicals. The transfer of technology through highly packaged forms like foreign investment seemed by and large confined to the formulation and operational technology rather than techniques derived from basic research.

A study of the market shares of foreign companies in India vis-a-vis with their shares in a few developed and developing countries yielded interesting insights into the concentration of multinational corporations in the Indian pharmaceutical industry. The concentration is found highest in the case of Indian pharmaceutical industry than in both developed and developing countries.[1] See for details table VII.

TABLE VII

COMPARATIVE MARKET STRUCTRES IN THE PHARMACEUTICAL INDUSTRY*

Country	Share of top 4 firms %	Share of top 10 firms %	Share of top 20 firms %
U. S. A	22	39	70
Japan	24	37	59
Brazil	14	26	50
Argentia	13	23	44
Mexico	14	24	48
India	33.51	49.82	77.16

*Refers to early seventies.

It is interesting to read from Table VIII that the propotion of bulk drugs produced by multinational corporations has been coming down over the years. If it was 36.17% in 1974–75, it declined to 21.8% in 1980–81, whereas the share of Indian sector including public sector increased from 62.82% in 1974–75 to 68.2 in 1980–81, the thrust of multinational corporations

1 P. Mohanan Pillai "Multinationals, Technology and Industrial Structure" Sardar Patel Institute of Economic and Social Research, Ahmedabad, 1982.

TABLE VIII

RATIO OF BULK DRUGS TO FORMULATIONS

Sectors	Ratio as on 1980-81
Foreign sector	1:12.53
Indian sector	1:2.66
Public sector	1:1.26

continues to be, as the Hathi Committee has observed long back, "towards capitalising our drug formulations and non-drug items like cosmetics and luxury goods where technology and capital inputs are much lower and which permits promotion of aggressive salesmanship and brings in much higher returns on investment". What is more tragic has been the breach by the multinational corporations of the important National Drug Policy directive stipulating that the ratio of bulk drug to formuations production by them must not be lower than 1.5, but latest statistics summarised below indicate that they are nowhere near the official guidelines.

From Table VIII, it follows that foreign companies produce only one unit of bulk drug in order to produce 12.53 units of formulations indicating extremely weak integration with the domestic chemical industry. The deficiency in the production of bulk drug is being met by them through imports mostly from parental sources. This practice gives rise to abusive practices such as transfer pricing, the details of which we shall discuss later in sections.

Can multinationals only be blamed for this distortion? A careful study of the attitude of the government will reveal that it has been reverting from the declard policy of controlling multinationals. For example, contrary to the spirit of 1978 drug policy a decision was taken to regularise the excess capacity of multinatianal companies. Moreover in the wake of liberalisation of drug policy announced since 1980, the government has again gone back from its basic stand that the foreign companies which porduce bulk drugs from the penultimate stage should orient the production from basic stage. For example,

when six multinational companies were producing 42 bulk drugs from penultimate stage, instead of calling back licenses issued to them the government simply gave licenses to seven other foreign firms to produce ten bulk drugs! There is nothing to ensure that they will not be producing these bulk drugs from penultimate stage. Examples of such laxity on the part of the government can be multiplied.

Public Sector at the Service of Multinatinals ?

Insofar as the production of a drug is basically interwowen with that needed for the production of basic chemicals, it is the public sector enterprises that imparted a fair amount of technological strength to the industry by the downstream manufacture for the production of important antibiotics, bulk synthetic drugs etc. It is the emergence of public sector enterprises, not the multinationals, that picked up the challenges of the industry.

How is it that foreign companies which produce a minor proportion of bulk drug dominate the market for formulations? Apart from their own production, a part of their requirement is being met by import. But a major chunk of their requirement is still met by procuring bulk drugs from public sector enterprises and derive more profitability. At the same time public sector's own production of formulations remains at a very low level. Instead of subsidising foreign companies why can't public sector itself go into the production of formulations? After all formulation technology is relatively simpler than bulk drug technology and also yields more profitability than bulk drug production. This is a question to be asked in this context. The new drug policy also does not seem to address this question seriously. The only way to counteract the dominance of multinationals in formulation market is through greater intervention of the public sector. The shyness of public sector is to be sought in the political economy of public sector in developing countries like that of India, which is intrinsically interconnected with the underlying political process. We may turn to a discussion of these aspects later.

4) The Mechanism of Foreign Companies

Why is it that despite the entry and development of public sector and Indian sector, foreign participation in the industry increased considerably? For example, foreign equity capital in subsidiaries increased from Rs. 96 million in 1964–66 to Rs. 170 million by 1969–70 and in foreign minority companies from Rs. 18 million to 44 million during the same period. Table IX presents data for 38 foreign firms, original equity stake, turnover, profits etc. It is clear from the table that the growth of equity has taken place largely through the conversion of reserve funds, capitalisation of imported machinery and know how. Since these firms are subsidiaries of transnational corporations in the import of knowhow, machinery and intermediate chemicals their sources are generally confined to foreign firms. In such cases, the real value added cannot be estimated in comparable monetary terms. In all cases, where the firms have Indian and foreign equity shares, foreign equity shares are alloted against the imported itmes and knowhow provided by foreign firms.[1]

For Examples, the present equity and perference capital of one foreign company is Rs. 80 million consisting of Rs. 72 million equity shares and Rs. 8 million preference shares. The perference share capital of Rs. 8 million is held by another drug company from the same foreign country. Out of Rs. 72 million equity shares, Rs. 18 million are held by Indians and the balance Rs 54 million represent foreign share holding. Of this amount, Rs. 3 million has been by way of foreign investment, while Rs. 36 million has been issued as bonus shares and Rs. 15 million towards trade mark users rights. The foreign investment Rs. 3 million too was not a genuine fresh investment but the assets of an erstwhile operating trading subsidiary company. Increase in foreign equity has been achieved by several units through bonus shares issued out of reserve funds accumulated from profits (see Table IX).

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1 These details are derived from UNCTAD "Technology problems in the pharmaceutical Industry, Geneve, 1980.

(c) Control Through Foreign Collaborations

So far we have been discussing one aspect of multinational corporations, namely, the foreign investment. It is signifiicant to note that most of the foreign minority held firms and wholly Indian owned firms have entered into collaboration agreements with foreign firms for the import of technology, at least in the organised sector. The tie up with foreign firms through collaboration agreements for the import of technology is one of the effective instruments of foreign control in this industry in India.

For example, the terms and conditions of foreign collaboration agreements have been very rigid and restrictive. Nearly 117 foreign collaborations were concentrated in the pharmaceutical industry from 1960 to 1980, (see Table X showing the number of collaborations and payments for it). An analysis of a sample of 71 agreements out of 92 approved till 1967 showed that as many as 41 agreements remained valid for ten years and above. Among these, 40 agreements stipulated royalty at 5 per cent and above of sales. With respect to the type of technology most of the cases were for a package of patents, trade marks and knowhow. The contractual agreements have also been characterised by restrictive conditions especially in relation to marketing. For example, according to Reserve Bank of India survey, 50 per cent (26 out of 52) agreements in operation in the pharmaceuticals had export restrictions.[1] Other types of restrictions relate to the restrictions on manufacturing of products similar to those produced under foreign collaboration; restrictions on internal sale, restrictions on capacity of output etc. The point of emphasis would be that the mechanism of technology transfer became more and more packaged and concentrated and controlled with the result that foreign control in the pharmaceutical industry remained quite dominant.

(1) Transfer Pricing

The control exercised in the industry via technology

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1 See Reserve Bank of India "Survey on Foreign Collaboration", R. B. I., Bombay, 1968 and 1974.

TABLE IX

EQUITY, TURNOVER AND REMITTANCES OF FOREIGN OWNED PHARMACEUTICAL FIRMS: YEAR OF ESTABLISHMENTS, EQUITY, TURNOVER PROFITS AND REMITTANCES OF PHARMACEUTCIAL FIRMS IN INDIA, 1971

(in Rs. million)

Firm No.	Year of establi-shment	Equity				Turnover		Net profit including tax 1971	Remittances		
		Original	Present	Foreign Direct & Indirect	%	Drugs	Others		1971 Div.	Roya-ty Tech.	Ex-ports
1	2	3	4	5	6	7	8	9	10	11	12
1	N.A.	0.10	1.10	1.10	100.00	0.57	0.07	10.14	2.27	—	0·45
2	1937	3.53	43.40	33.12	75.30	9.92	248.00	23.78	3.45	0.09	3.09
3	1923	0·01	0.01	0.008	80.00	19.32	0.12	3.35	0.06	—	0.73
4	1921	N.A.	N.A.	N.A.	100.00	29.22	0 87	6.73	1.54	—	—
5	1958	0.40	30.00	17.23	57.45	22.98	82.19	16.18	—	—	0.75
6	N.A.	0.10	0.60	0.60	100.00	2.91	8.44	2.40	0.66	—	—
7	1954	1.50	6.00	3.64	60.60	35.59	—	1.95	0.14	—	2.63
8	1924	1.00	7.50	4.50	6.00	52.11	2.53	6.11	0.61	0.02	0.76
9	1950	0.50	5.00	5.00	100.00	30.47	3.66	3.66	0.76	—	1.35
10	N.A.	—	—	—	—	0.36	55.15	9.12	2.29	—	—
11	1928	0.30	48.75	316.88	65.00	120.32	55.57	15.57	3.59	—	2.67
12	N·A.	—	—	—	100.00	2.56	—	0.20	N.A.	—	—
13	1947	0.15	7.01	4.96	65.00	77.86	16.37	27.70	2.11	—	1.95
14	N.A.	0.50	0.34	—	49.00	—	—	0.31	—	—	—

17	1950	N.A	N.A.	N.A.	100.00	0.74	—	N.A.	—	—	—
18	1944	0.01	4.00	2.57	68.20	35.65	—	2.82	0.14	—	0.11
19	1914	0.15	72.00	54.00	75.00	184.60	103.00	30.71	2.11	0.80	5.58
20	N.A.	0.20	0.20	0.17	79.40	17.88	—	1.19	—	0.39	—
21	N.A.	0.84	0.60	0.53	88.57	19.35	—	3.16	—	0.38	0.10
22	1960	2.00	3.60	2.70	75.00	47.07	—	5.97	0.61	—	2.42
23	1946	N.A.	N.A.	N.A.	100.00	32.47	—	5.55	—	4.07	0.01
24	1926	N.A.	N.A.	N.A.	100.00	77.21	3.11	12.54	1.81	—	2.68
25	1958	18.00	18.00	10.80	60.00	66.25	16.40	15.21	2.21	—	8.87
26	1958	2.00	6.69	3.05	60 00	8.22	—	0.55	N.A.	—	—
27	N.A.	N.A.	N.A.	N.A.	100.00	10.84	0.88	2.47	—	—	0.008
28	1894/1907	3.75	10.50	8.75	83.33	88.45	—	23.46	1.65	—	0.44
29	1950	0.20	56.00	42.00	75.00	176.60	81.80	41.95	6.83	—	6.81
30	1951	3.00	25.00	17.50	70.00	9.88	51.35	10.66	0.93	—	2.01
31	1964	2.75	7.00	3.83	55.00	48.32	—	4.85	0 39	—	1.13
32	1958	5.00	10 00	8.90	89.00	65.20	—	11.94	1.68	—	2.02
33	N.A.	0.20	0.85	0.44	66.00	69.12	34.48	10.00	0.93	—	2.81
34	1947	1.00	15.00	9.00	60.00	62.12	—	Loss	—	—	2.11
35	1967	6.00	6.00	3.40	57.00	10.22	—	Loss	—	—	2.11
36	N.A.	0.75	1.13	0.66	59.90	4.29	9.19	1.60	0.09	—	0.41
37	N.A.	N.A.	N.A.	N.A.	100.00	35.93	—	N.A.	2.73	—	0.37
38	1960	3.37	7.50	5.55	74.00	24.42	—	16.35	0.42	—	0.10

SOURCE: UNCTAD 'Major Issues in Indian Pharmaceutical Industry'—1980

TABLE X

NUMBER OF FOREIGN COLLABORATIONS IN THE PHARMACEUTICAL INDUSTRY

Year	Number of collaborations	Payments for collaborations* (Rs. lakhs)
upto 1965	76	
1965	6	25
1966	4	18
1967	6	25
1968	4	26
1969	1	13
1970	1	82
1971	3	40
1972	1	35
1973	3	59
1974	–	52
1975	2	3
1976	1	115
1977	3	117
1978	2	104
1979	2	85
1980	2	106

*Only royalty and technical fees.

transfer and foreign investment enables multinational corporations to drain India of her resources through dubious methods such as transfer pricing. Transfer pricing refers to over pricing the imported intermediates by a parent multinational company to its subsidiary in India. Intermediates imported by the subsidiary will be far higher than the international price for the product.

Instances of over pricing in India have been reported. According to a study by P. L. Badami, Librium was introduced into the Indian market at more than Rs. 5,555 per kg, while local firms could import it for Rs. 312 per kg. A foreign subsidiary was charging Rs. 60,000 for a kg. of dexamethazone

which was reduced to Rs. 16,000 on threats and pressures by the controller of imports. The international price of a particular bulk drug used in the treatment of heart disease is approximately $ 30 per kilogram. A multinational was producing it in India in the early 1970s by importing the basic raw materials from its parent company. The C. I. F. price paid for this import was $ 871 per kilogram. Such examples can be multiplied.

A recent systematic study on the incidence of transfer pricing by multinational subsidiaries revealed that the outflow of resources on this account alone amounts to Rs. 550 lakh an year.[1] According to the Kafauver Committee of U. S. A. drug prices in India were the highest in the world and were in inverse proportion to the per capita income. Drug price indices in developed countries have been falling when static groups of drug price index calculated on the basis of the prices of eight age old static drugs showed a rise by 41.9 per cent during 1961-1970.

Brand Names and Product Differentiation

In India, pharmaceutical industry controlled by Multinational corporations is notorious for its use of high pressure sales techniques. When new products which are only "molecular manipulations" (with no therapeutic gains and a bye-product of marketing oriented research than genuinely innovational research) are introduced in the market, they are backed up with a barrage of high-powered promotion. The success depends much on branding them and impressing the doctors the virtue of particular brand names. The 'merit' of brands are proved to be of a dubious kind. They promote a product differentiation under which the same basic drug is marketed under different brand names. There are around 14 to 15 thousand brand names circulating in India for some 700 basic drug. The amount of promotion expenditures on brand names is just stupendous, around 23 per cent of the value of sales in the case of some foreign companies (see Table XI). Some companies like Pfizer spend even more. No wonder then that as many as 406, 308,

1 See C. P. Chandrasekhar, 'Transfer Pricing by Multinationals in India, Social Scientist, January, 1981

155 and 115 formulations under different names are marketed for vitamin B complex, multi-vitamin tablets, chlorophenicol, and vitamin B 12 respectively. What is more disturbing in this context is that multinational corporations market in India drugs which are not authorised for sale in the country of origin. The U. S. Food and Drug Administration has circulated among the Federal agencies a comprehensive list of 369 drug products that it considers either ineffective or unduly hazardous. It is not precisely known how many of these are being currently sold in India.

The main components of heavy sales promotion, are as shown in Table XI, the extensive advertising net work through medical representatives, medical literature, sponsored conferences, business gifts, free samples which help in getting the brand image imprinted in doctors' minds. Doctors may not be in a position to remember innumerable brand names and prescriptions are often biased towards the brands having the most effective promotion efforts, for, "No other drug is so insistently sought after, chased, wooed, pressured and downright importuned as the physician".[1] It is to be remembered in this context that brand names give no scientific information regarding the product, while equivalent generic names ensure the recognition of their pharmacological composition. The instances in which lower prices are stressed as a major selling point are rare.

A study of Aggarwal et. al, in India brings out how foreign firms charge excessive prices for branded drugs. They have investigated the market prices of 19 drugs in 1972 each of which were sold simultaneously by foreign and Indian firms. The unweighted average of all the drugs taken together showed that the items with brand names were sold for 110 per cent more than charged by public sector units. The excess prices in relation to large and small Indian firms were 55 per cent and 129 per cent respectively.

There is often an argument that brands assure quality than generic names. But this argument found no relevance when

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1 See Alan Norton, "Drugs, Science and Society", William Collins and Company, Glasgow, 1974.

TABLE XI

SALES PROMOTION EXPENDITURE OF FOREIGN COMPANIES IN INDIA SALES PROMOTION EXPENDITURE (IN PERCENTAGE)

Sl. No.	Medical Representatives	Free Samples	Free literature	Advertisement	Special Incentive	Total Expenditure on promotion as % of total sales
1	62.0	17.6	0.9	5.6	13.93	13.57
2	54.4	27.2	15.6	2.8	0.00	5.00
3	54 4	32.6	11.9	0.6	0.5	7.20
4	47.8	5.9	9.2	27.1	10.0	13.00
5	57.9	22.8	10.4	6.1	2.8	9.6
6	42 5	24.1	11.1	12.1	10.2	20.0
7	40.3	5.8	2.9	41.6	9.4	8.0
8	18.1	18.1	38.7	6.6	18.2	18.7
9	54 6	33.2	4 1	1.7	6.4	7.8
10	43 4	32.1	15.0	4.3	5.2	14.4
11	50.0	36.5	10 5	9.0	14.0	13.3
12	45 6	33 0	12.9	2.4	6.1	9 9
13	47.9	16.0	11.2	21.4	3.5	13.2
14	4 44	59.7	17.1	5,0	13.8	5.2
15	24.4	5.4	5.3	1 3	63.6	7.9
16	62 9	26.2	4.3	0.6	6.0	1.7
17	62.6	4.7	0.0	32.7	0.00	0.62
18	7.0	54.6	22.0	2.2	14.2	8.3
19	48.7	7 9	14.4	1.0	27.0	11.0
20	40.7	25.1	8.3	13.3	12.6	9.9
21	58 0	18.9	21.8	1.3	0.00	9.4
22	65.7	27.3	4.3	2.7	0.00	11.3
23	51.1	13.2	18.1	15.2	2.4	10 6
24	68 3	20.3	7.5	2.5	1.4	8.2
25	16.5	8.1	16.0	37.9	21.4	12.9
26	38.8	44.7	7.1	4.7	4.7	6.8
27	32.5	12.8	2.5	36.5	15.7	23.2
28	51.7	33.0	15.3	0.9	0.0	18.7
29	28 9	40.5	0.00	26.6	4.0	12.4
30	56.9	23 0	13.6	1.5	5.0	17.6
31	35.1	42.1	21.5	0.6	0.7	5.2
32	54.5	22.7	0.00	22.8	0.0	4.4

SOURCE: Science Today, Vol, V, No. 5, 1970.

examined by Hathi Committee, for, it remarked "there has been no instance where a product marketed under generic name has been reported spurious". It has gone to the extent of saying that for a number of drugs extensively used, pharmacological names should be immediately applied. But on the final decision on the Committee's report the government has endured to abolish the brand names of only 5 drugs. It should be remembered in this connection that countries like Sri Lanka, Bangladesh etc, have successfuly implemented reforms abolishing brand names which led to substantial reduction in the price of pharmaceuticals without infringing on the quality. May be government's reluctance to abolish brand names is not so much the fear of spurious drugs flooding the market but those posed by strong multinational lobby to preserve the exploitation of Indian consumers.[1]

Contradiction between Disease Pattern and Drug pattern

Is the higher levels of production in the pharmaceutical industry in confirmity with the pattern of prevalent diseases? As observed earlier, the industry is bestowed with the responsibility of protecting the health of the nation by orienting its product structure to the prevailing disease pattern. An attempt is made here to classify the major drugs available in India for such diseases. Tables XII and XIII provide data on the number of patients treated in 12 states in India and the market share of various drugs by therapeutic groups, respectively. A comparative study of these two tables underlines the inappropriateness of the drugs produced in India for catering to the needs of the people. Infections and parasitic diseases (e g, dysentry, Malaria cholera) and respiratory diseases (general respiratory illness and tuberculosis) are the major classes of illness prevalent in India. Drugs for these major illness should be available in India for indigenous production but paradoxically most of the required drugs are not produced and if at all produced it is in such a

1 See S. Lall and Bible "Political Economy of Controlling Transnationals", Economic & Political Weekly, Special Number, 1977.

small quantity that the requirements are to be met by imports. Whereas sales of vitamins, cough and cold preparations, tonics and health restorators which are used for no ailment in particular constitute 22% of the total sales of pharmaceuticals in the country, essential medicines such as anti-tuberculosis etc, has a market share that is equal to that of antacids and smaller than that of cardio vascular drugs (see table XII and XIII).

TABLE XII

CASES AND DEATH REPORTED DUE TO VARIOUS DISEASES DURING 1973-74 INDIA

Disease	Cases	Deaths
1 Filariasis	20,000,00	1,360,000
2 Dysentery	3,800,880	2,114
3 Leprosy	3,200,000	?
4 Influenza	1,643,142	101
5 Malaria	1,300,000	?
6 Gastro-enteritis	799,199	3,514
7 Tuberculosis	340,052	5,530
8 Whooping cough	198,094	304
9 Enteric fever	190,997	1,343
10 Infecetions Hepatitis	99,816	948
11 Gonocoocal infection	90,544	55
12 Syphilis	60,606	42
13 Measles	56,521	149
14 Tetanus	52,535	3,291
15 Chickenpox	34,067	30
16 Cholera	17,000	3,600
17 Rabies	14,187	151
18 Diptheria	11,052	444
19 Meningococcal infection	6,435	143
20 Poliometitis	3,792	11
28 Encephaliting	?	1,728

SOURCE: Central Drug Research Institute, "Country Status paper of Indira", April 1976, mimeo.

TABLE XIII

MARKET SHARE OF VARIOUS DRUGS BY THERAPEUTIC GROUPS, 1973, ALL INDIA

	Therapeutic group	Market share (per cent)
1	Antibiotics	19.9
2	Vitamins	11.7
3	Cough and cold preparations	5.5
4	Haematinics	5.3
5	Tonics and Health Restorers	5.2
6	Harmones	4.8
7	Dermatological preparations	4.1
8	Analgesics	3.8
9	Anti-rheumatics	3.1
10	Anti-diarrhoeals	3.1
11	Dietetics	2.6
12	Enzymes and Digentants	2.5
13	Cardio-vascular drugs	1.8
14	Anti-spasmodics	1.8
15	Psycho-therapeutics	1.7
16	Opthalmological	1.7
17	Anti-asthmatics	1.6
18	Amoebicides	1.5
19	Anti-T. B. Preparations	1.4
20	Antacid	1.4
21	Sulphonamides	1.3
	Others	12.8

Source: Committee on Drug and Pharmaceutical Industry, Report, New Delhi: Ministry of Petroleum and Chemicals, 1975.

It is interesting now to examine the share of foreign companies. An analysis of the formulations marketed by 27 foreign subsidiaries as shown in the table revealed that vitamins formed 16% of the total, tonics or nutrients and cough syrups 3.2%, analysetics and antipyratics 3%, tranquilisers and sedatives 7.1%and antihistaminics 4%. And of 1388 formulations, marketed in India in 1972 by foreign subsidiaries, only 186

were introduced to the country after 1966, among which most contain antibiotics. The most recent drug and formulations introduced into the Indian market by foreign subsidiaries came into the world market more than a decade ago (see for details Table XIV).

Research and Development

One of the dynamic effects postulated with regard to the activities of multinational corporations is that their operations in developing countries like India will lead to research and intensive technological advancement. But the pharmaceutical industry dominated by multinational corporations showed an extremely poor record of research and development. The R&D expenditure of all Indian companies as percentage to sales is calculated to be around I.5, whereas in advaced countries it is as high as 10 to 11 percent of total sales. Studies in the past indicated that there is no serious attempt on the part of foreign companies to adapt and assimilate imported technology and to make further progress on it. In particular, they have shown no interest in tropical drug research, such as antimalarials, antituberculosis etc. With 40 to 50 years of existence they have yet to come out with a drug the knowhow of which has been developed entirely in India. What all research and development studies undertaken is generally confined to and relevant for the parent companies' research efforts. Instances have been quoted as in the cases of few companies where in the name of experimentation, human trials were carried out first in India even before trials were carried out in the West. It is also alleged that some subsidiaries of multinationals do research on processes which is forbidden for experimentation in advanced countries. May be India is a preferred area for multinationals because of the absence of any strict rules of safety against genetic engineering research. Such examples of multiational companies doing irrelevant research in the Indian context can be multiplied.

Hathi Committee has already testified the ability of some of the multinational corporations' subsidiaries and affiliates in the pharmaceutical industry to do R & D, but since these subsidiaries are replicating the products of their parent companies,

TABLE XIV

GROUP-WISE CLASSIFICATION OF PRODUCTS OF 27 FOREIGN DRUG COMPANIES

Sl. No.	Product (Group-wise)	Total No. of formulations in market (1972)	Formulations introduced from 1966-72	New Drugs introduced through these formulations from 1966-72	Original year of introduction of the drugs (col.5) into clinical use
1	Antibiotics (including chloramphenicol)	183	27	Nil	
2	Vitamins	216	5	Nil	
3	Anti-infectives				
	Sulphas	42	1	Nil	
	Antimalarial	11	Nil	Nil	
	Antifilarial	7	Nil	Nil	
	Antidysentary	38	13	2	1960
	Antihelminthics	18	8	1	1960
	Antileprosy	6	2	Nil	
	Anti T. B.	30	13	Nil	
	Antifungal	3	Nil	3	1945-1950
	Antiseptic	39	Nil	Nil	
4	Steroids and Hormones	121	14	Nil	
5	Tranquilisers & Sedatives	96	13	7	1958 to 1963
6	Antihistaminics	53	3	2	1959-60
7	Tonics, Nutrients or deficiency drugs	54	2	Nil	
8	Expectorants, Cough syrups etc,	43	4	2	

9	Analgesics and Antipyretics	38	6	3	1954
10	Alkaloids including cardiac glycocides	37	4	Nil	
11	Vasodilators, Coronary and peripheral	34	8	4	1953-64
12	Antacids	24	4		
13	Antispasmodics	15	4	2	1960
14	Anticonvulsants	14	Nil	Nil	
15	Antihyperatensives	14	2	2	1960-61
16	Analeptics	19	1	Nil	
17	Diuretics	17	4	2	1959-60
18	Anaesthetic	17	11	2	1958-60
19	Hypoglycemics	12	5	Nil	
20	Laxatives	9	Nil	Nil	
21	Vasoconstrictors	8	2	Nil	
22	Sera and Vaccines	8	Nil	Nil	
23	Anticancer drugs	14	9	8	1954-62
24	Enzymes	15	Nil	Nil	
25	Dyes & X-Ray Contrast media	11	6	1	
26	Muscle relaxants	6	Nil	Nil	
27	Anti-depressants	2	1	1	1960
28	Household remedies (ext. appn.)	16	6	Nil	
29	Foods including proteins	9	Nil	Nil	
30	Non-drug items	26	1	Nil	
31	Misc. drugs	13	7	2	
	Total	1338	186	43	

SOURCE: UNCTAD "Technology Problems in the Pharmaceutical Industry, *op cit.*

the subsidiaries are actually been discouraged by parents to do genuine R & D necessary for Indian conditions. The Sandoz group, for example, spends nearly 9 per cent of the world wide turnover on R & D, whereas its Indian subsidiary spent only 1.4 per cent of its turnover on R & D in 1976. The data on R & D expenditure by 43 FERA drug companies, though inflated (as they include expenditure on marketing research, and even some cases on quality control, in order to enable the drug multinational corporations to benefit the tax concessions for R & D expenditures), showed that, despite various tax incentives offered by the Government and high profitability, R & D outlays are dismally low. 27 out of the 43 companies spent only one per cent of their turnover with only 4 companies spending more than 3 per cent.[1] though the policy directive of the government suggests that foreign companies should spend 4 per cent of their sales turnover as recurring expenditure on R & D. No wonder then that none of the innovations in the Indian pharmaceutical industry belongs to the multinationals. But what is more disturbing in this context is the systematic sabotage by multinational corporations of the efforts by Indian companies to develop and utilise their innovations.

Indian innovations, a victim of sabotage by Multinational Corporations

In many areas of essential drugs research, the Indian companies had made rapid success. But such successful efforts could not be carried forward due to the opposition from drug multinationals and also due to the charry attitude of the government of India. On the basis of already known facts,[2] we may reconstruct below the struggle between the foreign technology imported by Multinationals and indigenous technology developed by pure Indian firms.

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1 Nagesh Kumar and Kamal Mitra Choudary "Multinational Corporations and Self-reliance": A Case study of Drugs and Pharmaceuticals, IIPA, New Delhi, 1980.

2 See for details, UNCTAD, "Technical Issues in the Indian Pharmaceutical Industry", *op cit.*

(a) Anti-tubercular drugs

Para-amino-salicylic acid was produced in India during the Second Five Yer Plan period (1956-61) by an Indian firm which was subsequently closed down. Another Indian firm with indigenous technology went into production in 1956, with a licensed capacity of 48 tons and expanded further to 100 tons per annum. By the process based on imported intermediate inputs and a process of carbonation and extraction P A S was produced indigenously. An Indian firm in Calcutta went further ahead and produced the intermediate input of m-aminophenol from locally available nitrobenzene. This firm discontinued production due to high cmpetition from foreign companies. While the technology developed by the Indian firm suffered,two more foreign companies started production with 60 tons and 72 tons annual capacity in 1962 based on imported m-aminophenol. Upto 1967 production continued to be based on imported m-aminophenol, and other inputs. As the public sector of the pharmaceutical industry became more advanced, m-aminophenol manufacture has become completely indigenous. Other intermediate inputs are supplied by Indian private industry.

The story is similar for the manufacture of isonicotinic acid, a substance useful for its anti-tubercular properties. isonicotinic acid (INH) production started in India immediately after its anti-tubercular activity was discovered in 1952. An indigenous process was developed through oxidation of gamma picoline to form picolinic acid and and hence isonicotinic acid.

At the beginning gamma picoline and hydrazine hydrate were imported. Meanwhile, two foreign firms entered the field with foreign technology based on imported gamma cyanopyridine. In 1967, the imported ingredients in the manufacture varied from 21 per cent for Indian firms to around 82 per cent for foreign firms. The Indian firms were using nitric acid for the oxidation of picoline while foreign firms were using imported potassium permanganate. Currently, the foreign firms have switched over to nitric acid. In 1967, the public sector started production of hydrazine hydrate and in 1968, a foreign firm started production of gamma picoline but not in adequate

quantities. Formaldehyde, necessary in the process, is also indigenously available. Interestingly enough, PAS and INH were known as chemicals long before their anti-tubercular properties were recognised and consequently they were not covered by any patent.

Thiacetazone, another anti-tuberculosis drug, is yet another drug where foreign technology has played an insignificant role in indigenous production. Two Calcutta firms did pioneering work on this product in the early fifties and small quantities were produced from p-introtoluene.

The original two Indian firms have gone out of production but a third Indian firm is the only producer, relying on p-introtoluene obtained from a public sector unit. Thiacetazone, however, is no longer popular since there is a choice among the more recent introduction for resistant strains of TB.

(b) Anti-leprosy Drugs: Diamino Diphenyl Sulphone

Leprosy is a major scourge in India and Diamino Diphenyl Sulphone was found clinically effective in human leprosy in 1943. A Calcutta firm prepared the drug from basic chemicals in 1948 and subjected it to prolonged testing at the School of Tropical Medicine, Calcutta. A plant of seven ton capacity was commissioned entirely with indigenous know-how in 1950. Around 1958, however, a foreign subsidiary was also licensed to produce twice the output of the pioneering Indian firm.

(c) Anti-diabetic Drugs

Insulin is an anti-diabetic drug produced from imported sheep pancreas. For the last 10 years it has been produced by one foreign firm with a licened capacity of 1,500 mega units, but an actual production of about half of that. According to the Tariff Commission in 1968, 90 per cent of the raw materials are imported. Over the last 10 years, there has been hardly any change in the pattern of production and no other firm has come forward with manufacturing plants. The technology does not appear to have diffused into the country at all.

Tolbutamide: Oral hypoglycemics came into prominence around 1955 and one foreign and two Indian firms had licences

issued in 1959-60. But due to legal battles on patent infringement, production in the Indian units was started late. The foreign unit commenced production in 1962 based on 99 percent imported chemical inputs. In contrast, a local firm, Haffkine Institute, making the drug in small quantity was using imported items only upto 15 to 20 per cent. The foreign unit had not changed over its production to indigenously available raw material even as late as 1974, while indigenous technology has been taken up by two Indian units which went into production later.

Chloropropamide: Introduced abroad in 1958, it represents a similar case. Two Indian and one foreign units are currently engaged in its production. Synthesis of the drug was achieved by an Indian firm in 1961 under Indian patent No. 67108 of 1959. The firm started porduction of 600 kg. in 1961, but was dragged into the court by a foreign firm challenging the validity of the Indian patent. By 1962 the imported raw meterials were only about 50 per cent. A foreign unit obtained a licence in 1962 for production but did not exploit it. Yet another foreign unit with 10 tons annual capacity was licensed in 1965 and in 1967 the Tariff Commission had evaluated the production of this unit to consist of 89 per cent imported raw materials.

(d) Antimalarials

Chloroquin: Chloroquin is a product discovered during World War II, but actually a rediscovery of a German drug of the 1930s. An Indian company with foresight started working on the drug and succeeded in its synthesis as early as 1946 based on m-chloroaniline process. As of 1967 about 47 percent of the raw materials were imported. In 1963 a foreign unit was also licensed to produce the drug from imported chemicals. Large scale imports and competitive production by the foreign firm has probably prevented the Indian firm from investing more money on the process of development of novaldiamine.

Amodiaquin is another antimalarial drug. One foreign unit and one Indian unit are currently in production, licensed in 1955 and 1956 respectively. The foreign unit accounts for the bulk of output from imported chemicals—as much as 85 per cent

the raw materials used being imported in 1967. Several intermediate chemicals are now produced by the public sector and the import content of this firm should have decreased, had the firm been genuinely interested in technology transfer to India.

(e) Anti-dysentery Drugs

Metronidazole: A foreign unit was licensed to produce this drug around 1970. Production is from the penultimate stage, although one intermediate input—ethylene oxide—is produced in the Indian private sector unit. Some of the imported inputs in the manufacture of this drug do not appear to have trade names and could therefore be fabricated locally.

Instances of the type described above lend strength to the contention that foreign technology was allowed to substitute for indigenous technology rather than being an impetus to it in Indian industry. Indigenous technology was active in drug production but never received the support needed for its development. Rather, it was overwhelmed by the large scale import of foreign technology from developed countries.

Profitability of Multinational Corporations

The official statistics is replete with evidence that shows higher profitability of foreign firms 'vis a vis' Indian companies. In particular the profitability of sectors such as perfumes cosmetics, medical and pharmaceutical products, and beverages the profitability of foreign firms are the highest. The data for 72-73, and 73-74 showed that when the average profitability of all foreign subsidiaries operating in India was only 9.5 and, 9.3 per cent respectively that of foreign subsidiaries in pharmaceuticals were to the order of 15.6 and 15.1 per cent. It is to be remembered in this connection that this represents profits on book values and does not include the remittances through other channels such as, transfer pricing etc.

Subsequently, though the average profitability remained slightly lower than that in the beginning of the 70s, i e, 14.8 per cent, and 13.8 per cent, in 1979 and 1980 respectively, relative shares of companies are not available for comparison. But what

is important is the magnitude of outgo in the form of remittances through dividend, royalty and technical fees. The increasing outflow of resources is given in Table XV. As the table demonstrates between 1975-76 to 1979-80 on account of dividend alone the remittance had been to the order of Rs. 17.5 crores. On the average foreign firms remittance had been increasing from Rs. 1.98 during 1961-64 to Rs. 4.55 crores during 1975-80.

TABLE XV
REMITTANCES OF FOREIGN COMPANIES
(Rs. crores)

Elements of outflow	1960-61 to 1963-64	1964-65 to 1969-70	1970-71 to 1974-75	1975-76 to 1979-80
I Dividend	5.88	16.26	16.95	17.50
II Royalty	1.27	3.16	1.01	3.93
III Technical Fees	0.79	1.14	0.88	1.35
Total	7.94	20.56	18.84	22.78
Average for the period	1.98	4.11	3.76	4.55

As rightly remarked by the Hathi Committee, the drain of foreign exchange by way of remission of profits by multinationals has to be viewed in the context of their import bill for drugs and intermediates in relation to their own export of drugs and not in terms of their total sales inclusive of formulations. When worked out on this basis it was found that from 1960 to 1980 foreign pharmaceutical companies drained off from India around Rs. 143.85 crores (see table XVI).

Sabotage of Price Policy?

The Hathi Committee in its report had gone to the question of evolving a suitable price policy so that the profitability of the foreign companies can be effectively curbed and essential drugs can be made available at lower prices and also to assure adequate quantities of essential drugs. Relying on WHO criteria it had drawn up a list 117 essential drugs whose prices are to be regulated in order to make available these medicines for millions of poorer sections. The drug policy announced in March 1978 and

TABLE XVI

FOREIGN EXCHANGE DRAINS BY MULTINATIONAL CORPORATIONS IN INDIA (Rs. crores)

	Total inflow (exports and other earnings)	Outflow due to imports	Trade Balance	Outflow on account of dividend, royalty, technical fees etc.	Total foreign exchange drain
1	2	3	4	5	6
1960-61	.30	6.10	–5.80	1.39	7.19
61-62	.30	4.80	–4.50	1.69	6.19
62-63	.40	4.90	–4.50	2.29	6.79
63-64	.30	3.80	–3.50	1.95	5.45
64-65	2.00	4.00	–2.00	2.78	4.78
65 66	2.20	4.70	–2.50	2.59	5.09
66-67	3.40	6.20	–2.80	2.90	5.70
67-68	3.60	6.40	–2.80	3.04	5.84
68-69	1.30	6.30	–5.00	3.02	8 02
69-70	2.10	6.70	–4.40	4.36	8.76
70-71	4.51	8.00	–3.49	5.04	8.53
71-72	4.56	8.50	–3.94	4.36	8.30
72-73	5.04	9.15	–4.11	4.28	8.39
73-74	6.50	7.47	–0.97	4.98	5.97
74-75	7.80	8.50	–0.70	1.66	2.36
75-76	11.52	12.27	–0.75	4.99	5.74
76-77	13.58	15.28	–1.70	5.92	7.62
77-78	16.22	19.95	–3.73	6.50	10.23
78-79	17.30	24.49	–6.99	4.24	11.23
79-80	19.38	32.49	–13.11	4.95	18.06
Total					143.85

Price Control Policy announced in April 1979, however did not take into account these criteria. Instead the products have been categorised into three groups allowing a mark up of 40, 55, 100 per cent respectively in each of the three groups. Category I&II

are the most essential drugs. Multinationals have cried itself hoarse over the unremunerative prices. They challenged the Provisions of Price Controls in court and systematically lobbied the bureaucrats and decision makers and practically rendered them ineffective. As a result of systematic non-utilisation of capacity of essential drugs by these companies, the country over the last few years had to resort to huge imports.

Need for Political Action

Why is it that multinational corporations, without contributing to the health needs of our society continue to survive and flourish? An answer to this is to be sought in the existing political order that accommodates the increasing interest of foreign companies. Controls fell flat on them largely because of the political leadership's charry attitude to the health needs of the people. May be they have also to gain from the large chunk of surplus appropriated by these companies. We are convinced of the fact that the struggle against foreign companies, if it is to be effective, have also to be part of the struggle against the existing political order. The mobilisation of the people by enlightening them about the prevailing exploitative mechanism can be considered as the first step.

The Kerala Sastra Sahitya Parishad has initiated a campaign for a People's Drug Policy as part of a People's Health Policy from the World Health Day, April 7, 1984. The question of essential versus non-essential drugs, the non-implementation of the Hathi Committee recommendations, the anti-people and unethical policies of the multinational companies, the rising price of the life-saving drugs etc will be highlighted during the campaign. The aim of the campaign is to sensitise the medical profession on these issues and launch a people's movement for the formulation of People's Drug Policy. KSSP is organising seminars, street meetings, exhibitions, signature campaign's, slide shows, street theatre programmes and publication of pamphlets and books, like the present one, as part of the campaign.